

CLAIMS

1. An apparatus for providing a touch sensation to a user of a simulated real world software program supported by a

5 computer comprising:

a garment covering a portion of the body of the user;

a plurality of electric-powered oscillating motors
embedded within the garment to provide the sensation of
touch on different areas of the body of the user;

10 a control interface with a logic address link to each of
the oscillating motors and a link to a computer executing the
simulated real world software program; and

said control interface activates one or more of said
oscillating motors upon receipt of a command signal
15 generated by said software program that translates into a
logic address corresponding to the link to the one or more
oscillating motors, which corresponds to a particular desired
touch sensation on one or more areas of the body of the user.

2. The apparatus for providing a touch sensation to a user of a simulated real world software program supported by a computer of Claim 1 further comprising:

a series of logic OR, NOR, NAND and AND gates

5 organized into flip-flop memory circuits and arranged to form one or more 4 x 16-bit decoders in the control interface; and

a decision block in the control interface generating a logic address output to activate the oscillating motor.

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3. The apparatus for providing a touch sensation to a user of a simulated real world software program supported by a computer of Claim 1 wherein the touch sensation simulates a contact with a graphic representation of a person generated by the software program.

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4. The apparatus for providing a touch sensation to a user of a simulated real world software program supported by a computer of Claim 1 wherein the software program is a game entertainment program.

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5. The apparatus for providing a touch sensation to a user of a simulated real world software program supported by a computer of Claim 1 wherein the software program is an adult entertainment program.

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6. The apparatus for providing a touch sensation to a user of a simulated real world software program supported by a computer of Claim 1 wherein the software program is a medical application program.

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7. The apparatus for providing a touch sensation to a user of a simulated real world software program supported by a computer of Claim 1 wherein the portion of the body covered is a limb.

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8. A system for creating a touch sensation to a user of a software program supported by a computer comprising:

a snug fitting garment covering a portion of a person's body;

5 a plurality of logic addressable electric-powered oscillating motors embedded into the garment covering a sector of said body;

10 a control interface with a logic address link to each of the oscillating motors, said control interface connected to said computer; and

said software program supported by said computer generating a command signal that translates into the logic address of one or more of the oscillating motors using the control interface to activate the one or more motors in said sector that corresponds to a particular desired touch sensation on one or more contact points within that sector.

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- 5 9. The system for creating a touch sensation to a user of a software program supported by a computer of Claim 8 further comprising a decision block circuit in the control interface that includes a 4x16-bit decoder generating bit values to activate all the motors in a sector corresponding to the logic address for said sector.
- 10 10. The system for creating a touch sensation to a user of a software program supported by a computer of Claim 8 further comprising a decision block circuit in the control interface that includes an output matrix 4x16-bit decoder generating high order bit values corresponding to the logic address for specified sectors.
- 15 11. The system for creating a touch sensation to a user of a software program supported by a computer of Claim 10 further comprising a decision block circuit in the control interface that includes an output matrix 4x16-bit decoder generating low order bit values corresponding to the logic address for an individual motor within a sector.
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12. The system for creating a touch sensation to a user of a software program supported by a computer of Claim 11 wherein the high order bit and the low order bit values determine the logic address to activate a specified motor within a specified sector.
13. The system for creating a touch sensation to a user of a software program supported by a computer of Claim 8 wherein the touch sensation corresponds to a contact depicted by video data generated by the software program.
14. The system for creating a touch sensation to a user of a software program supported by a computer of Claim 8 wherein the touch sensation corresponds to a contact depicted by video data processed by the software program.

15. A method for generating a touch sensation to a person using a computer application comprising the steps of:

providing a snug fitting garment covering a portion of the body of said person;

5 embedding a plurality of electric-powered oscillating motors in the garment covering said portion of the body;

providing a logic addressable link to each of the oscillating motors from a control interface connected to the computer application;

10 generating an information packet containing logic address data specifying one or more of the oscillating motors to activate on a computer using the computer application;

transmitting the logic address data to the control interface; and

15 translating the logic address data using a first circuit in the control interface into the logic address of one or more oscillating motors to activate.

16. The method for generating a touch sensation to a person
using a computer application of Claim 15 further comprising
the steps of:

5 organizing the plurality of motors into specified
sectors covering a portion of the body; and
translating the logic address data using the first
circuit into a logic address for a specified sector to activate
all motors in that sector.

- 10 17. The method for generating a touch sensation to a person
· using a computer application of Claim 16 wherein the
software application is a game.

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18. The method for generating a touch sensation to a person using a computer application of Claim 15 further comprising the steps of:

5 organizing the plurality of motors into specified sectors covering a portion of the body;

translating the logic address data using the first circuit into a high order and low order bit value output; and

10 processing the high order and low order bit value outputs using a fire decision matrix to translate to a logic address to activate one motor which corresponds to a particular touch sensation within one sector.

19. The method for generating a touch sensation to a person using a computer application of Claim 18 wherein the
- 15 software application is for medical treatment.

20. The method for generating a touch sensation to a person using a computer application of Claim 18 wherein the software application is for adult entertainment.